

## F21K

### LIGHT SOURCES NOT OTHERWISE PROVIDED FOR

#### Definition statement

*This place covers:*

The following light sources per se:

- Luminescence light sources that do not use electricity in the generation of their light (e.g. chemoluminescence, triboluminescence or thermoluminescence),
- Light sources that are created by charges of explosive or combustible materials (e.g. illuminating flash devices)
- Light sources that are not provided for in another subclass.

#### References

##### References out of a residual place

*Examples of places in relation to which this place is residual:*

Explosive or thermic compositions	<a href="#">C06B</a>
Luminescent materials	<a href="#">C09K 11/00</a>
Candles	<a href="#">C11C 5/00</a>
Incandescent mantles; other incandescent bodies heated by combustion	<a href="#">F21H</a>
Selection of luminescent materials for light screens	<a href="#">F21V 9/16</a>
Burners	<a href="#">F23D</a>
Fireworks	<a href="#">F42B 4/00</a>
Light pointers	<a href="#">G02B 27/20</a>
Photographic flash units	<a href="#">G03B 15/03</a>
Using a radioactive source to excite a material into luminescence	<a href="#">G21H 3/02</a> , <a href="#">H01J 65/06</a>
Electric discharge tubes or discharge lamps	<a href="#">H01J</a>
Electric incandescent lamps	<a href="#">H01K</a>
Semiconductor devices adapted for light emission	<a href="#">H01L 33/00</a> , <a href="#">H01L 51/50</a> - <a href="#">H01L 51/56</a>
Masers, lasers	<a href="#">H01S</a>
Electric arc lamps	<a href="#">H05B 31/00</a>
Electroluminescent light sources	<a href="#">H05B 33/00</a>

## F21K 2/00

**Light sources using luminescence (light sources using a charge of combustible material [F21K 5/00](#))**

#### Definition statement

*This place covers:*

- Light sources
- using luminescence;
- excited by infra-red radiation using up-conversion;

- using triboluminescence;
- using chemiluminescence;
- activated by an electric field i.e. electrochemiluminescence.

## References

### Limiting references

*This place does not cover:*

Light sources using a charge of combustible material	<a href="#">F21K 5/00</a>
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### References out of a residual place

*Examples of places in relation to which this place is residual:*

Using excitation by another light source	<a href="#">F21V 9/16</a>
Frequency changing of light	<a href="#">G02F 2/02</a>
Lamps, other than those in which all the electrodes are within the vessel, in which a screen or coating is excited to luminesce by radioactive material located inside the vessel	<a href="#">H01J 65/08</a>
Using electroluminescence	<a href="#">H05B 33/00</a>

### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

Luminescent materials	<a href="#">C09K 11/00</a>
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## F21K 2/005

{excited by infra-red radiation using up-conversion}

## References

### References out of a residual place

*Examples of places in relation to which this place is residual:*

Frequency changing of light	<a href="#">G02F 2/02</a>
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## F21K 5/00

**Light sources using a charge of combustible material, e.g. illuminating flash devices**

## References

### References out of a residual place

*Examples of places in relation to which this place is residual:*

Explosive or thermic compositions	<a href="#">C06B</a>
Fireworks	<a href="#">F42B 4/00</a>
Photographic flash units	<a href="#">G03B 15/03</a>

**F21K 5/023****{Ignition devices in photo flash bulbs}****References****References out of a residual place***Examples of places in relation to which this place is residual:*

Ignition devices being part of a shutter mechanism included in a camera	<a href="#">G03B 9/70</a>
Ignition devices not being part of a shutter mechanism and included in a camera	<a href="#">G03B 15/04</a>
Ignition circuits for combustion lamps	<a href="#">H05B 43/02</a>

**F21K 5/026****{using mechanical firing, e.g. percussion of a fulminating charge}****References****References out of a residual place***Examples of places in relation to which this place is residual:*

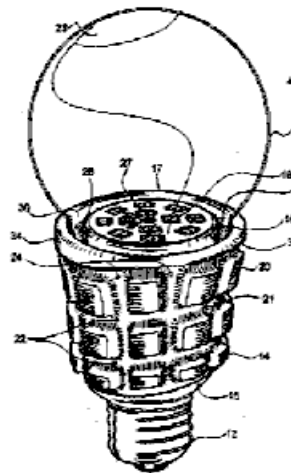
Ignition devices using mechanical firing included in a camera	<a href="#">G03B 15/0489</a>
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**F21K 9/00****Light sources using semiconductor devices as light-generating elements, e.g. using light-emitting diodes [LED] or lasers****Definition statement***This place covers:*

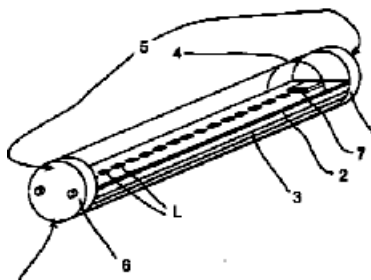
- LED lamp, consisting of a retrofit lamp, for replacement of a halogen, tungsten filament, discharged lamp or other similar lamp in an existing lighting device, the LED lamp having a connector for use with a standard socket of a existing lighting device, the LED lamp using one or more semiconductor as light generating element
- LED module, consisting of a self-contained assembly of light emitting diodes that can be installed as a unit, for insertion in a housing in order to form a lighting device, e.g. for street lighting

Examples for LED lamps

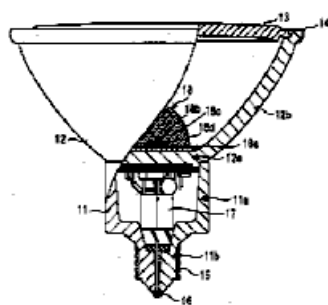
Ex.: US2010301729



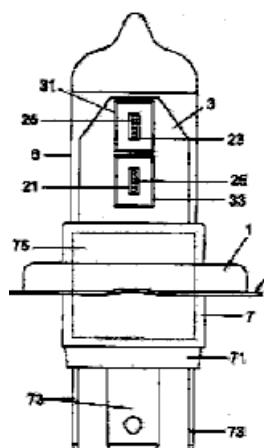
Ex.: DE102010002228



Ex.: WO2011055519

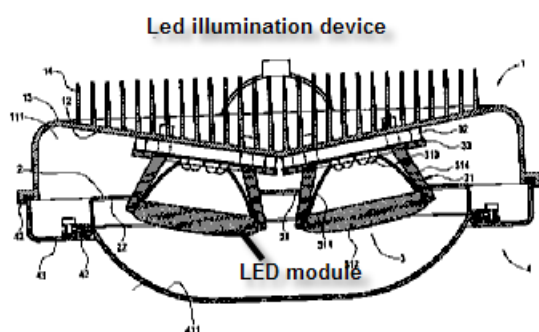


Ex.: WO2009037053



Examples for LED modules

Ex.: EP1998107



## References

### References out of a residual place

Examples of places in relation to which this place is residual:

Light emitting diodes, LED packages	<a href="#">H01L 33/00</a>
OLEDs per se	<a href="#">H01L 51/50</a>
Laser diodes per se	<a href="#">H01S 5/00</a>
Details of circuits arrangements for LED's	<a href="#">H05B 33/0803</a>
Control related to points in colour temperature diagram	<a href="#">H05B 33/0857</a>
Electric lamps using a combination of different types of light generation	<a href="#">H05B 35/00</a>

### Informative references

Attention is drawn to the following places, which may be of interest for search:

Systems of lighting devices of a modular construction, not provided for in main groups <a href="#">F21S 4/00</a> - <a href="#">F21S 10/00</a> or <a href="#">F21S 19/00</a>	<a href="#">F21S 2/005</a>
Lighting devices using a string rigidly mounted on a frame or included in a resin	<a href="#">F21S 4/20</a>
Details of lighting devices	<a href="#">F21V</a>

Packages with a plurality of LED dies	<a href="#">H01L 25/0753</a>
Details of printed circuit boards	<a href="#">H05K</a>

## Glossary of terms

*In this place, the following terms or expressions are used with the meaning indicated:*

LED	Light Emitting Diode
OLED	Organic Light Emitting Diode